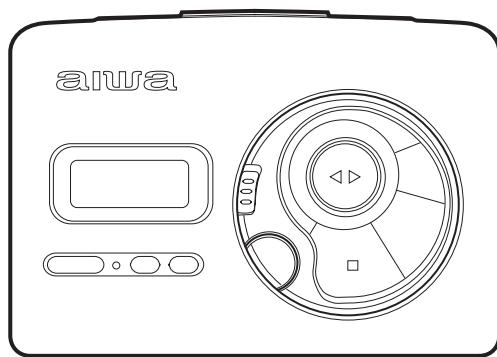




**HS-JX703**  
**HS-JX704**  
**HS-JX706**

YH  
YH, YJ  
AH



# SERVICE MANUAL

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STEREO RADIO  
CASSETTE RECORDER

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BASIC TAPE MECHANISM : 6ZM-2 R3NF

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**aiwa**  
S/M Code No. 09-999-418-5R1

REVISION

## SPECIFICATIONS

<b>Frequency range:</b>	DC 3V using two R6 (size AA) dry cell batteries
<b>Reception area "EU"</b>	AM 531–1,602kHz (9kHz steps) FM1,FM2 87.5–108MHz (50kHz steps)
<b>Reception area "USA"</b>	AM 530–1,710kHz (10kHz steps) FM1,FM2 87.5–108.1MHz (200kHz steps)
<b>Reception area "JPN"</b>	AM 531–1,629kHz (9kHz steps) FM1,FM2 76–108MHz (100kHz step in 76–90MHz, 50kHz step in 90–108MHz)
<b>Maximum output:</b>	7mW + 7mW (EIAJ 32ohms)
<b>Powersource:</b>	DC 3V using two R6 (size AA) dry cell batteries AC house current using the optional AC adaptor Aiwa AC-D302<YH,YJ>
	<b>Maximum dimensions:</b> 112.9(W)x81.2(H)x 33.8(D)mm (4 $\frac{1}{2}$ x 3 $\frac{1}{4}$ x 1 $\frac{3}{8}$ in.)
	<b>Weight:</b> Approx.160g (5.6 oz) (excluding batteries)

- Design and specifications are subject to change without notice.

# ELECTRICAL MAIN PARTS LIST

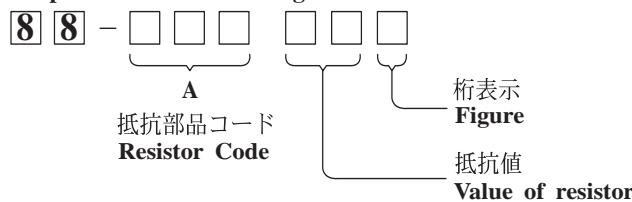
REF.NO.	PARTNO.	KANR NO.	DESCRIPTION	REF.NO.	PARTNO.	KANR NO.	DESCRIPTION
IC				C49	87-A11-056-080	C-CAP, U 1-10 Z F	
	87-002-677-080	IC, TA2002F		C51	87-A11-056-080	C-CAP, U 1-10 Z F	
	8Z-HJ8-610-010	C-IC, TC9327AF-501		C52	87-010-503-040	CAP, E 220-4 GAS	
	87-A20-638-080	C-IC, PST9120		C53	87-A10-025-080	C-CAP, U 0.22-16Z F	
	87-A21-407-040	C-IC, TA2104BFN		C54	87-010-943-180	C-CAP, E 100-4 M MV	
	87-A20-904-080	C-IC, TK11823MTL		C55	87-010-502-040	CAP ELECT GAS 100/4	
	87-A20-580-040	C-IC, BA3641FV		C56	87-012-286-080	CAP, U 0.01-25	
	87-A20-532-040	IC, LB1977M		C151	87-012-274-080	CHIP CAP, U 1000P-50B	
				C152	87-012-274-080	CHIP CAP, U 1000P-50B	
				C153	87-012-274-080	CHIP CAP, U 1000P-50B	
TRANSISTOR				C154	87-012-274-080	CHIP CAP, U 1000P-50B	
	87-026-299-080	C-TR FMG4		C155	87-012-274-080	CHIP CAP, U 1000P-50B	
	87-026-467-080	TR, HN1C01F (0.3W)		C201	87-012-195-080	C-CAP, U 100P-50CH	
	89-115-884-080	CHIP -TRANSISTER 2SA1588Y		C202	87-010-829-080	CAP, U 0.047-16	
	87-026-429-080	TR, RN2311		C203	87-A11-062-080	C-CAP, S 2.2-16 Z F	
	89-327-143-080	TR, 2SC2714 (0.1W)		C204	87-010-746-080	CAP, TANTAL 10-4	
	89-113-625-080	TR, 2SA1362GR(120MHZ, 0.		C205	87-012-274-080	CHIP CAP, U 1000P-50B	
	87-026-295-080	TR, DTC144TK		C206	87-A10-031-080	C-CAP, U 0.01-25 KB	
	87-026-424-080	C-TR, RN2306		C207	87-A10-031-080	C-CAP, U 0.01-25 KB	
	89-327-125-080	CHIP TR, 2SC2712GR		C208	87-A10-263-080	C-CAP, U 0.1-16ZF	
	89-342-153-080	TR, 2SC4215		C209	87-A11-056-080	C-CAP, U 1-10 Z F	
	87-026-482-080	TR, RN4610		C210	87-A10-263-080	C-CAP, U 0.1-16ZF	
	89-508-804-080	CHIP FET 2SK880Y		C211	87-A10-025-080	C-CAP, U 0.22-16Z F	
	87-026-679-080	C-TR, FMA8A		C212	87-012-274-080	CHIP CAP, U 1000P-50B	
	87-026-470-080	TR, HN1C03FB (0.3W)		C213	87-A10-031-080	C-CAP, U 0.01-25 KB	
	87-026-678-080	C-TR, FMG5A		C215	87-A10-031-080	C-CAP, U 0.01-25 KB	
	87-A30-125-080	C-TR, IMB3A		C216	87-A10-031-080	C-CAP, U 0.01-25 KB	
	89-413-284-080	TR, 2SD1328T		C217	87-A10-031-080	C-CAP, U 0.01-25 KB	
	87-026-418-080	TR, RN1311 (0.1W)		C218	87-012-195-080	C-CAP, U 100P-50CH	
	89-333-266-080	CHIP TR, 2SC3326B		C219	87-012-164-080	C-CAP, U 2P-50 CK	
DIODE				C221	87-012-174-080	CAP CHIP CERA SS 12P CHJ	
	87-017-779-080	C-DIODE, 1SS355		C222	87-A10-039-080	C-CAP, U 470P-50 J CH	
	87-001-167-080	DIODE, 1SS302 (100MA)		C223	87-010-829-080	CAP, U 0.047-16	
	87-017-366-080	DIODE, DAN 202U		C224	87-012-168-080	C-CAP, U 6P-50 D CH	
	87-A40-395-080	C-ZENER, UDV2.2B		C225	87-012-274-080	CHIP CAP, U 1000P-50B	
	87-017-367-080	DIODE, DAP202U		C226	87-012-167-080	C-CAP, U 5P-50 CH	
	87-A40-630-040	C-DIODE, RB411D		C227	87-010-575-080	C-CAP, S 560P-50 UJ	
	87-A40-360-080	C-DIODE, MA786		C228	87-A10-263-080	C-CAP, U 0.1-16ZF	
MAIN C.B				C230	87-A10-031-080	C-CAP, U 0.01-25 KB	
	BP201	87-A90-601-010	FLTR, BPF GFWB7	C231	87-A10-263-080	C-CAP, U 0.1-16ZF	
C1	87-012-272-080	C-CAP, U 680P-50 B		C232	87-012-251-080	C-CAP, U 27P-50 UJ	
C2	87-012-272-080	C-CAP, U 680P-50 B		C233	87-A11-056-080	C-CAP, U 1-10 Z F	
C3	87-012-272-080	C-CAP, U 680P-50 B		C234	87-A11-056-080	C-CAP, U 1-10 Z F	
C4	87-012-272-080	C-CAP, U 680P-50 B		C235	87-A10-952-080	C-CAP, TN 22-4 M A MCM	
C5	87-012-286-080	CAP, U 0.01-25		C236	87-A10-031-080	C-CAP, U 0.01-25 KB	
C6	87-012-286-080	CAP, U 0.01-25		C237	87-A11-062-080	C-CAP, S 2.2-16 Z F	
C7	87-A10-952-080	C-CAP, TN 22-4 M A MCM		C238	87-A10-031-080	C-CAP, U 0.01-25 KB	
C8	87-A10-952-080	C-CAP, TN 22-4 M A MCM		C401	87-012-274-080	CHIP CAP, U 1000P-50B	
C9	87-010-787-080	CAP, U 0.022-25		C402	87-012-274-080	CHIP CAP, U 1000P-50B	
C10	87-010-787-080	CAP, U 0.022-25		C403	87-012-274-080	CHIP CAP, U 1000P-50B	
C21	87-A11-056-080	C-CAP, U 1-10 Z F		C404	87-012-274-080	CHIP CAP, U 1000P-50B	
C22	87-A11-056-080	C-CAP, U 1-10 Z F		C405	87-A11-056-080	C-CAP, U 1-10 Z F	
C23	87-A10-707-080	C-CAP, U 0.47U-16 F Z		C406	87-A11-056-080	C-CAP, U 1-10 Z F	
C24	87-A10-707-080	C-CAP, U 0.47U-16 F Z		C407	87-A11-056-080	C-CAP, U 1-10 Z F	
C25	87-A11-282-080	C-CAP, S 1-16 K B		C408	87-A11-056-080	C-CAP, U 1-10 Z F	
C26	87-A11-282-080	C-CAP, S 1-16 K B		C409	87-A11-056-080	C-CAP, U 1-10 Z F	
C27	87-A11-056-080	C-CAP, U 1-10 Z F		C410	87-A11-056-080	C-CAP, U 1-10 Z F	
C28	87-A11-056-080	C-CAP, U 1-10 Z F		C411	87-A11-056-080	C-CAP, U 1-10 Z F	
C41	87-012-278-080	C-CAP, U 2200P-50 B		C412	87-A11-056-080	C-CAP, U 1-10 Z F	
C42	87-012-278-080	C-CAP, U 2200P-50 B		C413	87-010-831-080	C-CAP, U 0.1-16F	
C43	87-010-424-080	CAPACTOR, TANTAL 4.7-4		C414	87-010-831-080	C-CAP, U 0.1-16F	
C45	87-010-831-080	C-CAP, U, 0.1-16F		C451	87-A10-422-080	C-CAP, TN 10-4 A TCF	
C46	87-010-831-080	C-CAP, U, 0.1-16F		C452	87-A10-704-080	C-CAP, TN 100-2.5 M B2	
C47	87-010-502-010	CAP GAS 100-4		C453	87-A11-056-080	C-CAP, U 1-10 Z F	
C48	87-010-502-040	CAP ELECT GAS 100/4		C454	87-A11-056-080	C-CAP, U 1-10 Z F	
				C455	87-010-787-080	C-CAP, U 0.022-25 KB	
				C456	87-010-787-080	C-CAP, U 0.022-25 KB	
				C457	87-015-923-080	C-CAP, TN 0.22-35	
				C458	87-015-923-080	C-CAP, TN 0.22-35	
				C459	87-A10-952-080	C-CAP, TN 22-4 M A MCM	

REFNO.	PARTNO.	KANR NO.	DESCRIPTION	REFNO.	PARTNO.	KANR NO.	DESCRIPTION
C460	87-A10-952-080	C-CAP, TN 22-4 M A MCM	C106	87-A10-025-080	C-CAP, U 0.22-16Z F		
C461	87-012-286-080	CAP, U 0.01-25	C107	87-012-176-080	C-CAP, U 15P		
C462	87-A10-952-080	C-CAP, TN 22-4 M A MCM	C108	87-012-176-080	C-CAP, U 15P		
C463	87-A11-056-080	C-CAP, U 1-10 Z F	C109	87-A10-048-080	C-CAP, TN 22-4 M F95 S		
C464	87-A11-056-080	C-CAP, U 1-10 Z F	C110	87-A10-031-080	C-CAP, U 0.01-25 KB		
C601	87-A10-952-080	C-CAP, TN 22-4 M A MCM	C111	87-012-274-080	CHIP CAP, U 1000P-50B		
C602	87-012-286-080	CAP, U 0.01-25	C112	87-012-274-080	CHIP CAP, U 1000P-50B		
C603	87-012-279-080	C-CAP, U 2700P-50 B	C114	87-012-274-080	CHIP CAP, U 1000P-50B		
C604	87-012-286-080	CAP, U 0.01-25	C115	87-A10-263-080	C-CAP, U 0.1-16ZF		
C605	87-012-278-080	C-CAP, U 2200P-50 B	C131	87-A11-056-080	C-CAP, U 1-10 Z F		
C606	87-012-267-080	C-CAP, U 270P-50 B	C301	87-012-191-080	CHIP CAP 68 PF		
C607	87-012-267-080	C-CAP, U 270P-50 B	C302	87-012-167-080	C-CAP, U 5P-50 CH		
C608	87-012-271-080	CAP, U 560P-50	C303	87-012-170-080	C-CAP, U 8P-50 CH		
C609	87-012-271-080	CAP, U 560P-50	C304	87-A10-263-080	C-CAP, U 0.1-16ZF		
C610	87-012-286-080	CAP, U 0.01-25	C305	87-A11-056-080	C-CAP, U 1-10 Z F		
C611	87-012-286-080	CAP, U 0.01-25	C306	87-010-787-080	CAP, U 0.022-25		
C701	87-A11-062-080	C-CAP, S 2.2-16 Z F	C307	87-A11-282-080	C-CAP, S 1-16 K B		
C702	87-010-503-040	CAP, E 220-4 GAS	C308	87-012-195-080	C-CAP, U 100P-50 J CH		
C703	87-010-944-180	C-CAP, E 220-4 M MV	L301	87-A50-230-080	C-COIL, D-D (CP4LBM)		
C801	87-A10-828-080	C-CAP, U 0.33-6.3 K B	L302	87-003-243-080	C-COIL, S 10UH		
C802	87-A10-263-080	C-CAP, U 0.1-16ZF	LCD101	8Z-HJ8-609-010	LCD, AIW4188		
C803	87-A10-827-080	C-CAP, U 0.47-6.3 K B	R110	87-022-245-080	C-RES U 18K-1/16WF		
C804	87-A10-504-080	C-CAP, U 0.047-16 K B	R111	87-022-245-080	C-RES U 18K-1/16WF		
C805	87-A10-504-080	C-CAP, U 0.047-16 K B	R112	87-022-223-080	CHIP RES 2.2K 1/16W F		
C806	87-A10-504-080	C-CAP, U 0.047-16 K B	R113	87-022-223-080	CHIP RES 2.2K 1/16W F		
C807	87-A10-504-080	C-CAP, U 0.047-16 K B	R114	87-022-223-080	CHIP RES 2.2K 1/16W F		
C809	87-A10-263-080	C-CAP, U 0.1-16ZF	R115	87-022-227-080	C-RES, U 3.3K-1/16W F		
C901	87-010-787-080	C-CAP, U 0.022-25 KB	R116	87-022-227-080	C-RES, U 3.3K-1/16W F		
CF201	87-A91-162-010	FLTR, PFS450A7	R117	87-022-231-080	C-RES, U 4.7K-1/16W F		
CF202	87-A90-991-010	FLTR, SFE10.7 MS239-A	S101	87-A90-665-280	C-SW, TACT LS7A2M		
CF203	87-A90-991-010	FLTR, SFE10.7 MS239-A	S102	87-A90-665-280	C-SW, TACT LS7A2M		
CN151	8Z-HJ8-615-080	C-CONN, 34P 6210	S103	87-A90-665-280	C-SW, TACT LS7A2M		
D201	87-A40-462-040	C-VARI-CAP, SVC347(S)	S104	87-A90-665-280	C-SW, TACT LS7A2M		
D202	87-A40-655-080	C-VARI-CAP, HVU200A	S105	87-A90-665-280	C-SW, TACT LS7A2M		
D203	87-A40-655-080	C-VARI-CAP, HVU200A	S106	87-A90-665-280	C-SW, TACT LS7A2M		
D951	87-017-883-010	LED, SLC22 VR3F RED	S107	87-A90-665-280	C-SW, TACT LS7A2M		
IFT201	87-A91-496-010	IFT, MW P-5DJ	S108	87-A90-665-280	C-SW, TACT LS7A2M		
J1	87-A60-438-010	JACK, 3.5 BLK ST W/O SW<3YH>	S109	87-036-379-180	C-SW, SL1-1-2 SS350		
J1	87-A60-437-010	JACK, 3.5 BLK ST W<4YH, YJ, AH>	S110	87-A90-665-280	C-SW, TACT LS7A2M		
J451	87-A60-438-010	JACK, 3.5 BLK ST W/O	S111	87-A90-378-080	C-SW, PUSH PT035C1T		
J701	87-A60-849-010	JACK, DC DIA 2.75 BLK	S112	87-A90-378-080	C-SW, PUSH PT035C1T		
L1	87-A50-322-080	C-COIL, S BK2125 LM252	X101	87-A70-064-110	VIB, XTAL 75KHZ VTC-200		
L2	87-A50-322-080	C-COIL, S BK2125 LM252					
L3	87-A50-322-080	C-COIL, S BK2125 LM252					
L4	87-A50-322-080	C-COIL, BK2125 LM2<4YH, YJ, AH>	FLEX C.B				
L201	87-HRA-603-010	BAR-ANT, MW		8Z-HJ8-607-010	PWB FLEX 34P		
L202	8Z-HJ8-616-010	COIL, FM RF 12T					
L203	8Z-HR8-613-010	COIL, FM OSC					
L204	87-003-226-080	COIL, 100UH J LAL02	SW C.B				
L601	87-HJ3-605-080	C-COIL, OSC BIAS		S153	87-A91-365-080	C-SW, PUSH 1-1-1 SPVG21	
PS901	87-A90-440-010	SNSR, PHOTO GP2S24N2-B					
S151	87-A91-421-010	SW, LEAF 6ZM-2(H)					
S152	87-A90-361-010	SW, PUSH SPBP51-H11.3					
S154	87-HJ3-608-010	SW, LEAF REC ASSY					
S155	87-HJ3-608-010	SW, LEAF REC ASSY		PH1	8Z-HKE-619-110	HEAD, ASSY 6ZM-2 (P10)	
S601	87-A91-345-010	SW, SL 2-2-3 SSAC					
SFR801	87-A90-734-080	C-SFR, 33K B RH03AXAN4X					
TC201	87-011-252-080	TRIMMERM 10P LAR					
TH801	87-A90-542-080	C-THMS, NTH5G2M35A472K04TE		86-ZM2-326-010	HEAD ASSY, EH 6ZM-2 R2		
VR1	83-HRC-609-010	VOL 20KAX2					
X201	87-A91-094-010	FLTR, CDA10.7 MG80A					
FRONT C.B							
C101	87-A11-056-080	C-CAP, U 1-10 Z F					
C102	87-A11-056-080	C-CAP, U 1-10 Z F					
C103	87-A10-263-080	C-CAP, U 0.1-16ZF					
C104	87-A10-263-080	C-CAP, U 0.1-16ZF					
C105	87-A10-263-080	C-CAP, U 0.1-16ZF					

## ○チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち

### Chip Resistor Part Coding



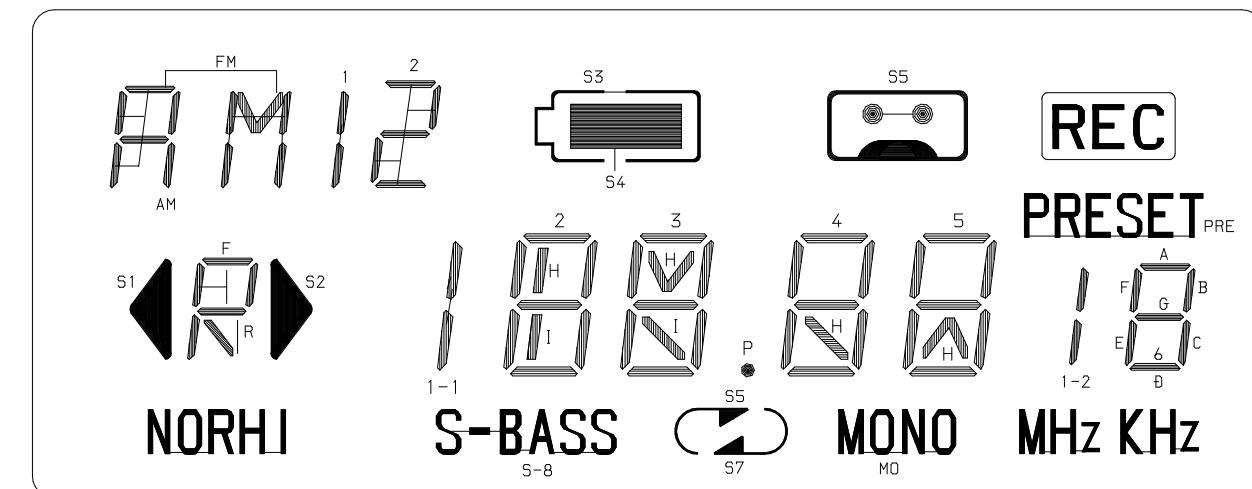
## チップ抵抗 Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions			抵抗コード Resistor :A :A	
				外形/Form	L	W		
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

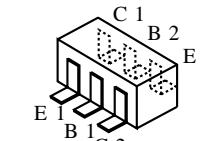
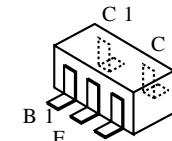
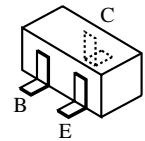
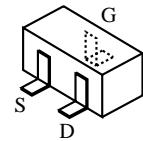
## LCD DIAGRAM

LCD, AIW4188

### GRID ASSIGNMENT



## TRANSISTOR ILLUSTRATION



2SK880Y

RN1311 2SA1588Y  
RN2311 2SC3226B  
RN2306 DTC144TK  
2SC2714 2SC2712GR  
2SC4215 2SA1362GR  
2SD1328T

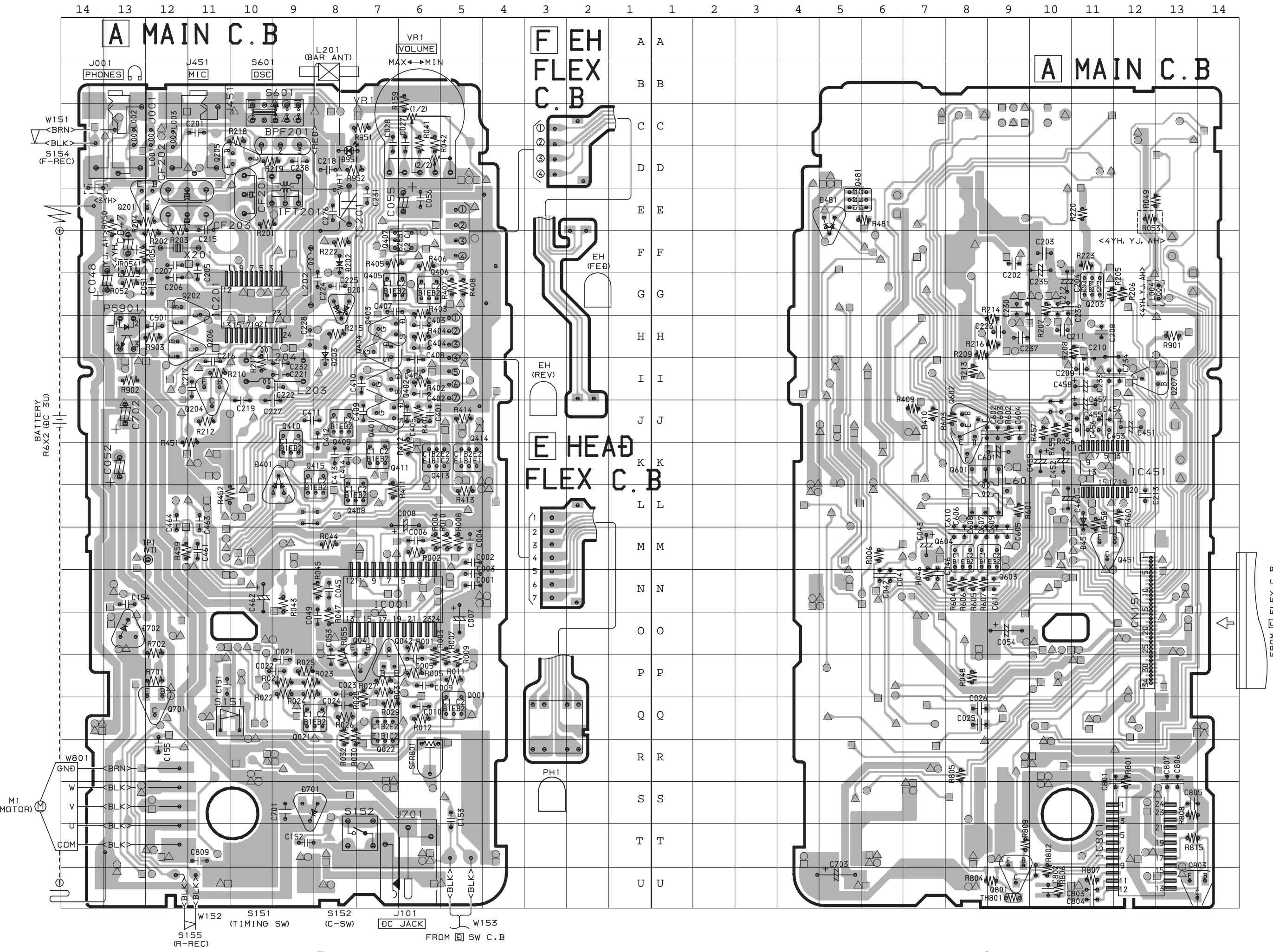
FMG4  
FMG5A  
FMA8A

IMB3A  
RN4610  
HN1C01F  
HN1C03FB

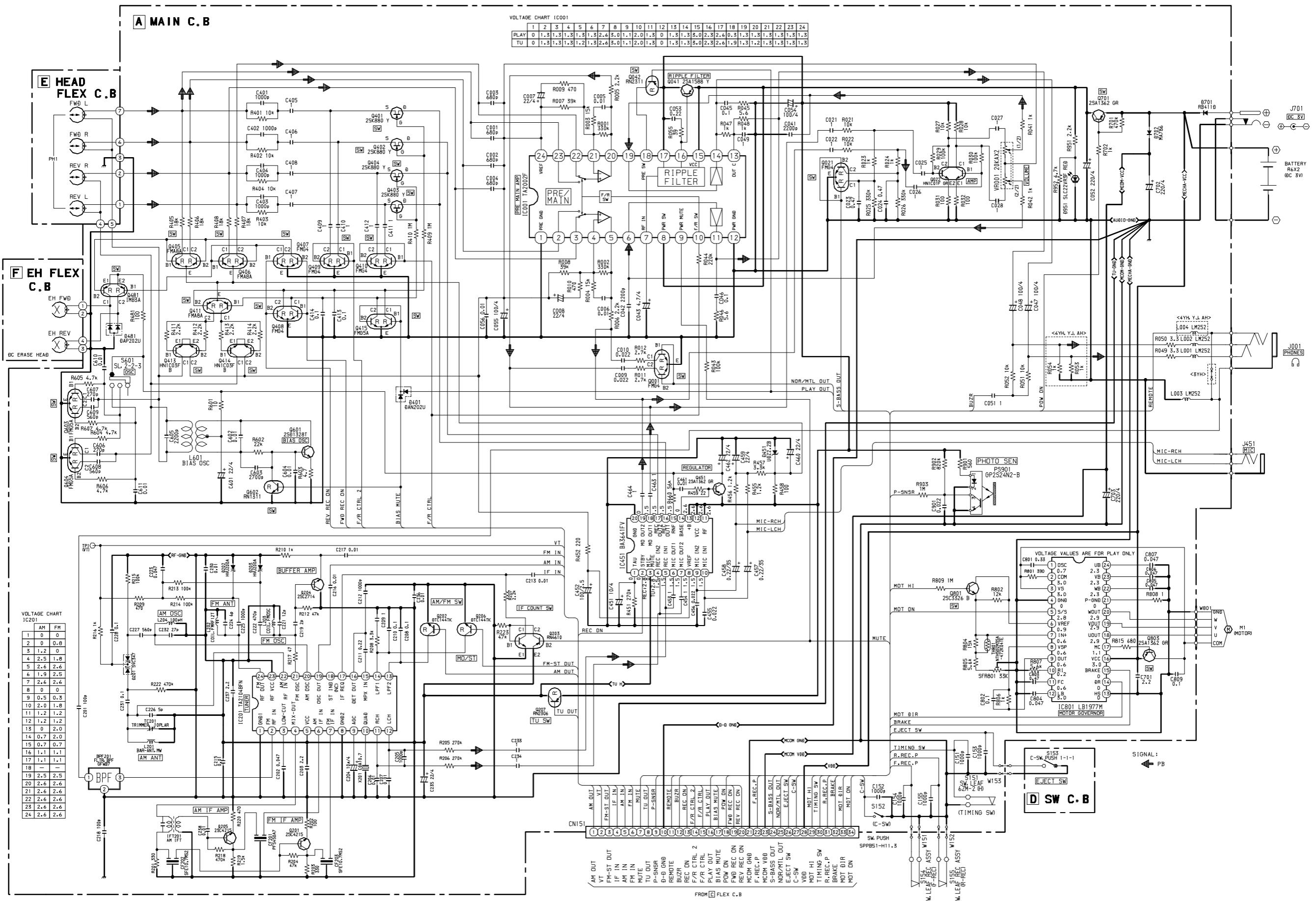
## ANODE CONNECTION

No	COM1	COM2	COM3	COM4
1	COM1	—	—	—
2	—	COM2	—	—
3	—	—	COM3	—
4	—	—	—	COM4
5	KHz	6C	6G	6B
6	6D	6E	6F	6A
7	MHz	1-2	PRE	REC
8	5H	5C	5B	5A
9	5D	5E	5G	5F
10	MO	—	4C	4B
11	—	4H	4G	4A
12	S7	4D	4E	4F
13	P	3C	3B	S5
14	3I	3G	3H	3A
15	3D	3E	3F	S3
16	HI	S2	2	S4
17	NOR	R	1	FM
18	S1	F	—	AM
19	S-B	2E	2F	1-1
20	2D	2I	2G	2H
21	S6	2C	2B	2A
22	—	—	COM3	—
23	—	COM2	—	—

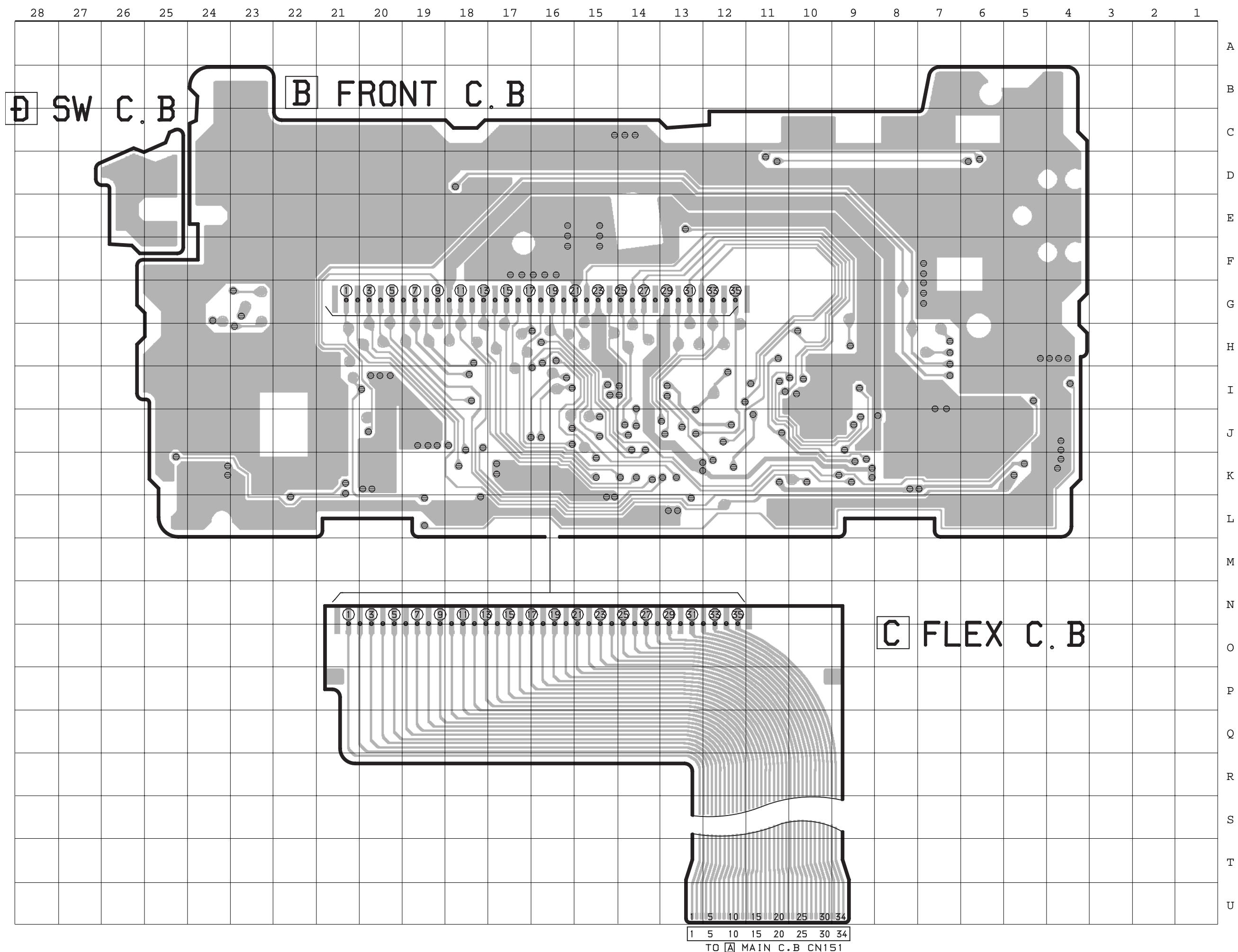
# WIRING-1 (MAIN)

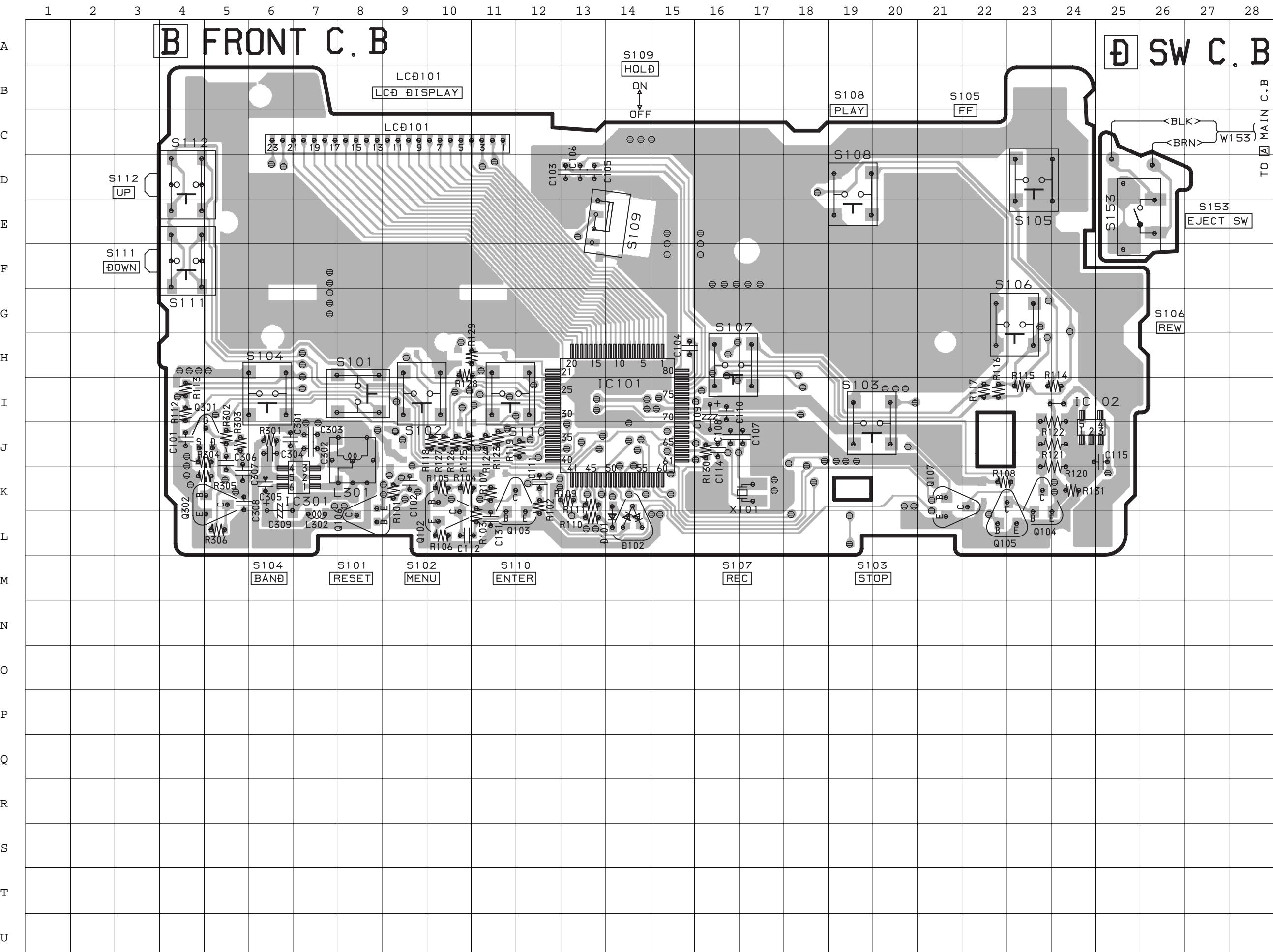


## SCHEMATIC DIAGRAM-1 (MAIN)

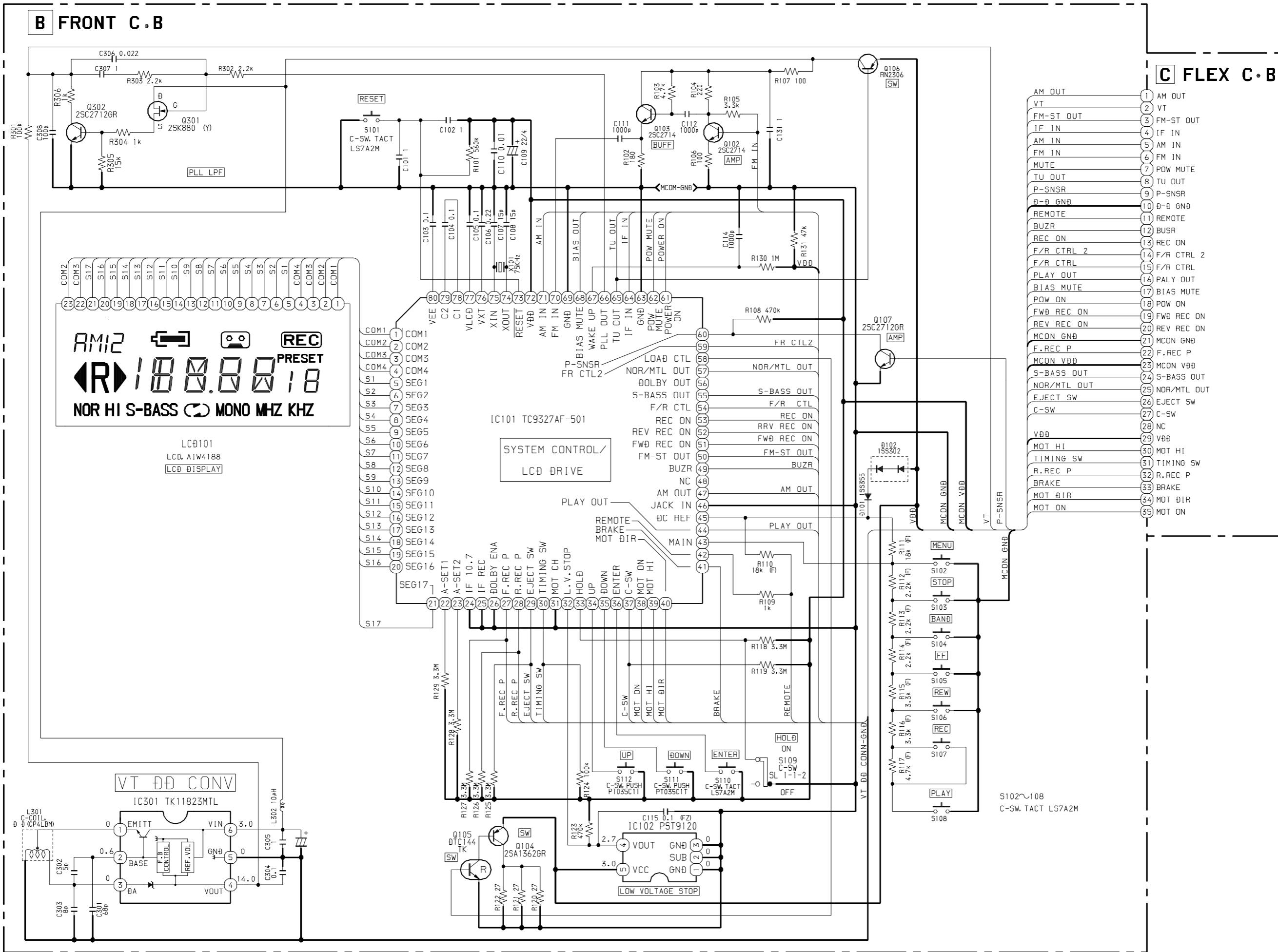


WIRING-2 (FRONT)



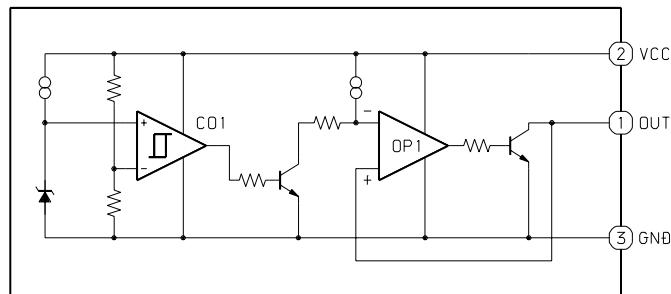


## SCHEMATIC DIAGRAM-2 (FRONT)

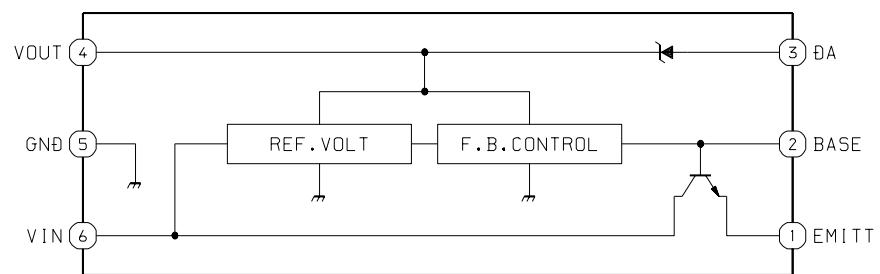


## IC BLOCK DIAGRAM

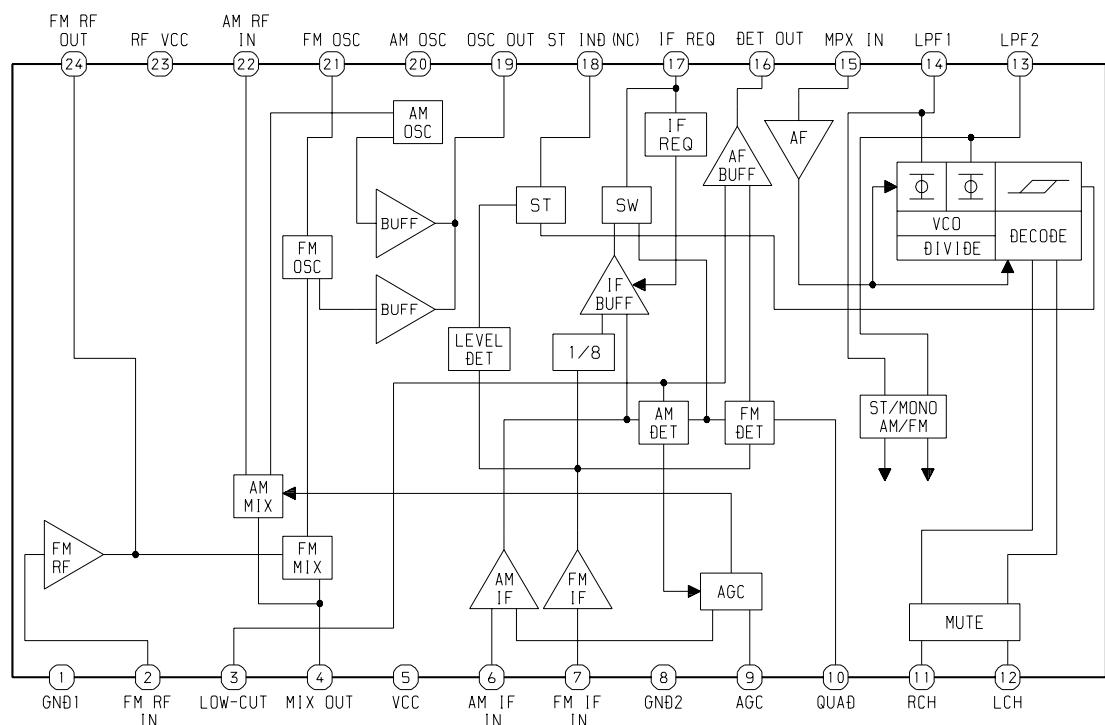
IC, PS9120



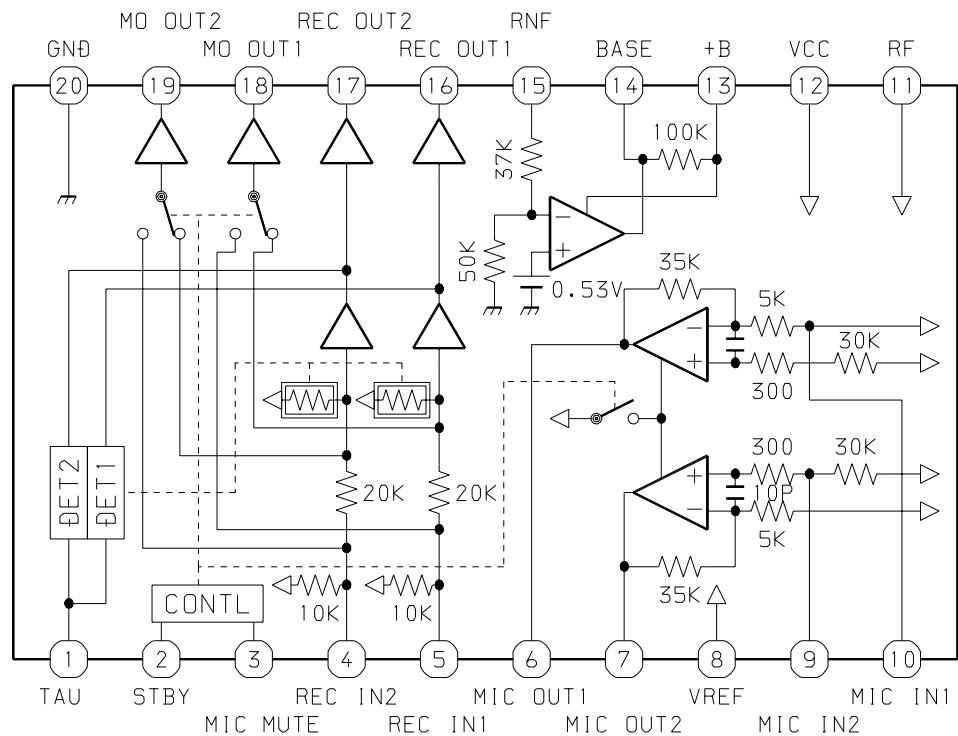
IC, TK11823MTL



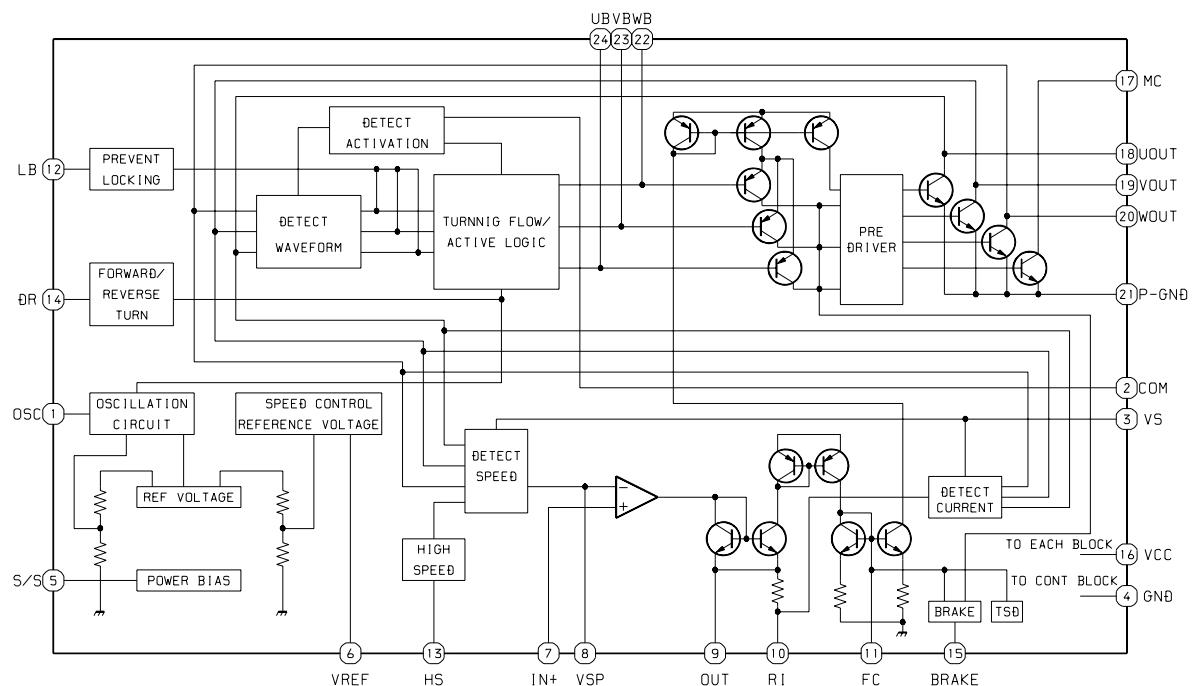
IC, TA2104BFN



IC, BA3641FV



IC, LB1977M



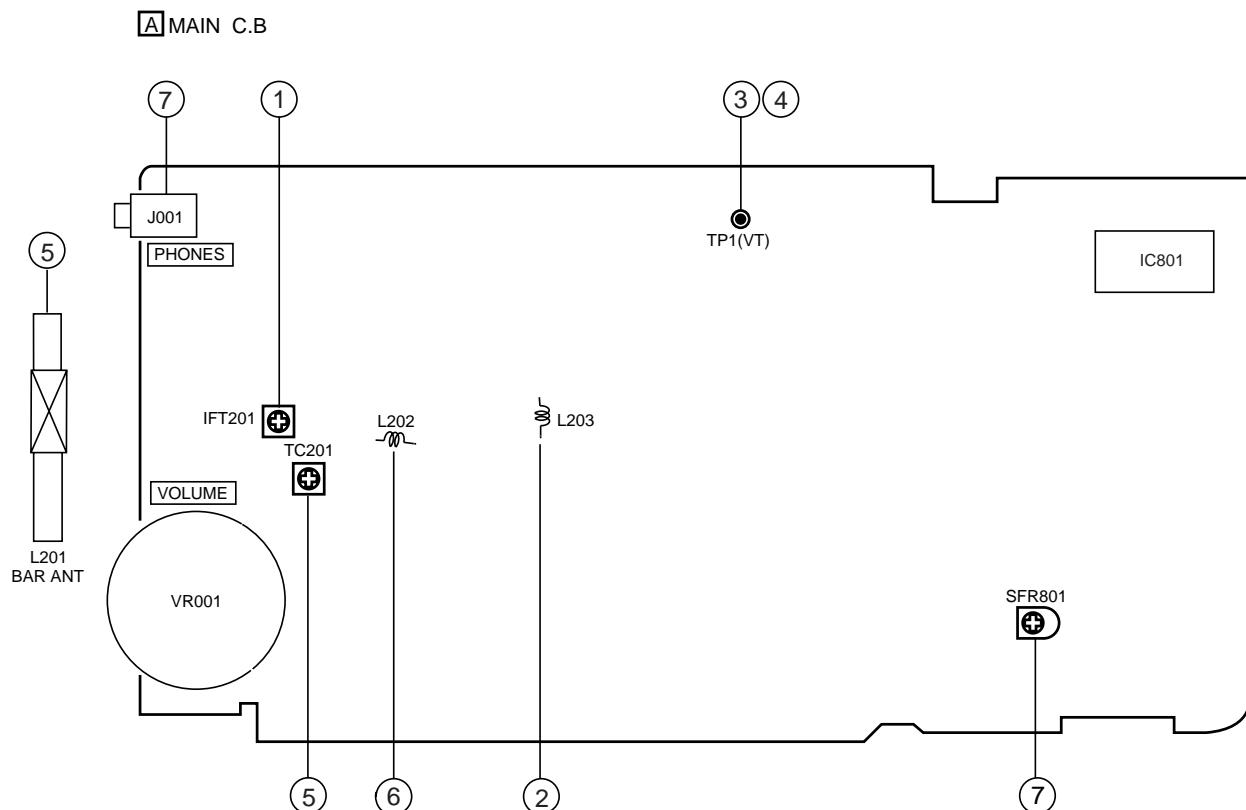
## IC DESCRIPTION

IC, TC9327AF-501

Pin No.	Pin Name	I/O	Description				
1~4	COM1~COM4	O	Output LCD common 1~4.				
5~21	SEG1~SEG17	O	Output LCD segment 1~17.				
22,23	A-SET1,2	I	Input pin for switching J, U, E, H areas.				
				J area	U area	E area	H area
			A-SET1	L	L	H	H
			A-SET2	L	H	L	H
24	IF 10.7	I	"H": IF 10.75 MHz. "L": 10.7 MHz.				
25	IF REC	I	"H": Count IF. "L": Count 1/8 IF.				
26	DOLBY ENA	I	Input pin for DOLBY enable. "H": DOLBY enable. "L": DOLBY disable.				
27	F. REC P	I	"H": FWD REC shift disable. "L": enable.				
28	R. REC P	I	"H": REV REC shift disable. "L": enable.				
29	EJECT SW	I	Input cassette open switch detection.				
30	TIMING SW	I	Input for mechanism operation detection.				
31	MOT CH	I	Input for motor activation detection.				
32	L.V. STOP	I	Input for mechanism stop operation by reduction current and key input control.				
33	HOLD	I	"H": Hold OFF. "L": Hold ON.				
34	UP	I	Input Up key. "H": Key ON. "L": Key OFF.				
35	DOWN	I	Input Down key. "H": Key ON. "L": Key OFF.				
36	ENTER	I	Input Enter key. "H": Key ON. "L": Key OFF.				
37	C-SW	I	Input pin for detecting the presence of cassette. "H": C-SW OFF. "L": C-SW ON.				
38	MOT ON	O	Output motor control. "H": Motor ON. "L": Motor OFF.				
39	MOT HI	O	Control motor. "H": Motor high speed. "L": Motor normal speed.				
40	MOT DIR	O	Output for motor rotation direction. "H": Counter Clockwise. "L": Clockwise.				
41	BRAKE	O	Output brake control for motor. "H": Brake ON. "L": Brake OFF.				
42	REMOTE	I	Input Remote control key.				
43	MAIN	I	Input Main unit key.				
44	PLAY OUT	O	"H": PLAY, FF and REW mode. "L": PLAY, FF and REW mode.				
45	DC REF	I	Input reference voltage for A/D.				
46	JACK IN	I	This is a pin where HP plug input is detected. "H": no plug. "L": plug exist.				
47	AM OUT	O	Output for AM mode. "H": AM mode. "L": Except AM mode.				
48	NC	—	Not connected.				
49	BUZR	O	Output buzzer.				
50	FM-ST OUT	O	Output FM MONO/ST switching.				
51	FWD. REC ON	O	"H": FWD REC mode. "L": Other mode.				
52	REV.REC ON	O	"H": REV REC mode. "L": Other mode.				
53	REC ON	O	"H": REC mode. "L": Other mode.				
54	F/R CTL	O	Output pin for tape run direction. "H": FWD direction. "L": REV direction.				
55	S-BASS OUT	O	Output S-BASS ON/OFF.				

Pin No.	Pin Name	I/O	Description
56	DOLBY OUT	O	Output DOLBY ON/OFF. (Not connected)
57	NOR/MTL OUT	O	Output normal tape and metal tape switching.
58	LOAD CTL	O	Output for checking power supply voltage. "H" : ON.
59	F/R CTL2	O	"H" : REV. "L" : FWD.
60	P-SNSR	I	Input for P-SNSR output waveform.
61	POWER ON	O	"H": POWER OFF. "L": POWER ON.
62	POW MUTE	O	Output muting. "H": MUTE OFF. "L": MUTE ON.
63	TEST	—	Connected to ground.
64	IF IN	I	Input IF signal.
65	TU OUT	O	Output "H". "H": TU mode. "L": except TU mode.
66	PLL OUT	O	Output phase comparison instrument.
67	WAKE UP	I	"H" : Normal mode. "L" : Clock stop mode.
68	BIAS MUTE	O	Output mute when REC. "H": MUTE ON. "L": MUTE OFF.
69	GND	—	Connected to ground.
70	FM IN	I	Input FM programmable counter.
71	AM IN	I	Input AM programmable counter.
72	VDD	—	Pin to apply voltage.
73	RESET	I	Input system reset signal.
74	XOUT	O	Crystal oscillation pin.
75	XIN	I	Crystal oscillation pin.
76	VXT	—	Power supply pin for crystal oscillation.
77	VLCD	—	Reference voltage pin for LCD drive.
78	C1	—	Reference voltage pin for LCD drive.
79	C2	—	Reference voltage pin for LCD drive.
80	VEE	—	1.5V constant voltage power supply pin for LCD drive.

## ADJUSTMENT



### <TUNER SECTION>

1. AM IF Adjustment  
IFT201 ..... 450kHz
2. FM IF Adjustment  
L203 ..... 10.7MHz
3. AM VT Check  
Settings : • Test point : TP1 (VT)  
Method : Set to AM 530kHz and check that the test point voltage is  $1.2V \pm 0.3V$ . Then set to AM 1602kHz and check that the test point voltage is less than 8.4V or set to AM 1710kHz and check that the test point voltage is less than 9.0V.
4. FM VT Check  
Settings : • Test point : TP1 (VT)  
Method : Set to FM 87.5MHz and check that the test point voltage is  $3.3V \pm 0.1V$ . Then set to FM 108.1MHz and check that the test point voltage is less than 9.0V.
5. AM Tracking Adjustment  
L201 ..... 630kHz  
TC201 ..... 1440kHz
6. FM Tracking Adjustment  
L202 ..... 87.5MHz

### <TAPE PLAYER SECTION>

7. Tape Speed Adjustment  
Settings : • Test tape : TTA-100  
(at Tape center)  
• Test point : PHONES JACK (J001)  
• Tape selector : NORMAL  
• S-BASS : OFF  
• Volume : MAX  
• Adjustment location : SFR801  
Method : Play back the test tape and adjust SFR801 for  $3015Hz \pm 10Hz$  (FWD) and  $3015Hz \pm 40Hz$  (REV). Then confirm WOW is less than 0.55%.

# PRACTICAL SERVICE FIGURE

## <TUNER SECTION>

### <FM SECTION>

Sensitivity : (IHF, THD 3%)  
 Less than 17dB  
 [at 76.0 / 90.0MHz]  
 Less than 18dB  
 [at 108.0MHz]  
 Distortion : Less than 2% (at input 54dB)  
 Less than 3% (at input 110dB)  
 [at 90.0MHz]  
 Stereo separation : More than 16dB  
 [at 90.0MHz]  
 Auto stop level : 12dB ± 5dB  
 [at 90.0MHz]  
 Intermediate frequency : 10.7 MHz ± 0.1MHz

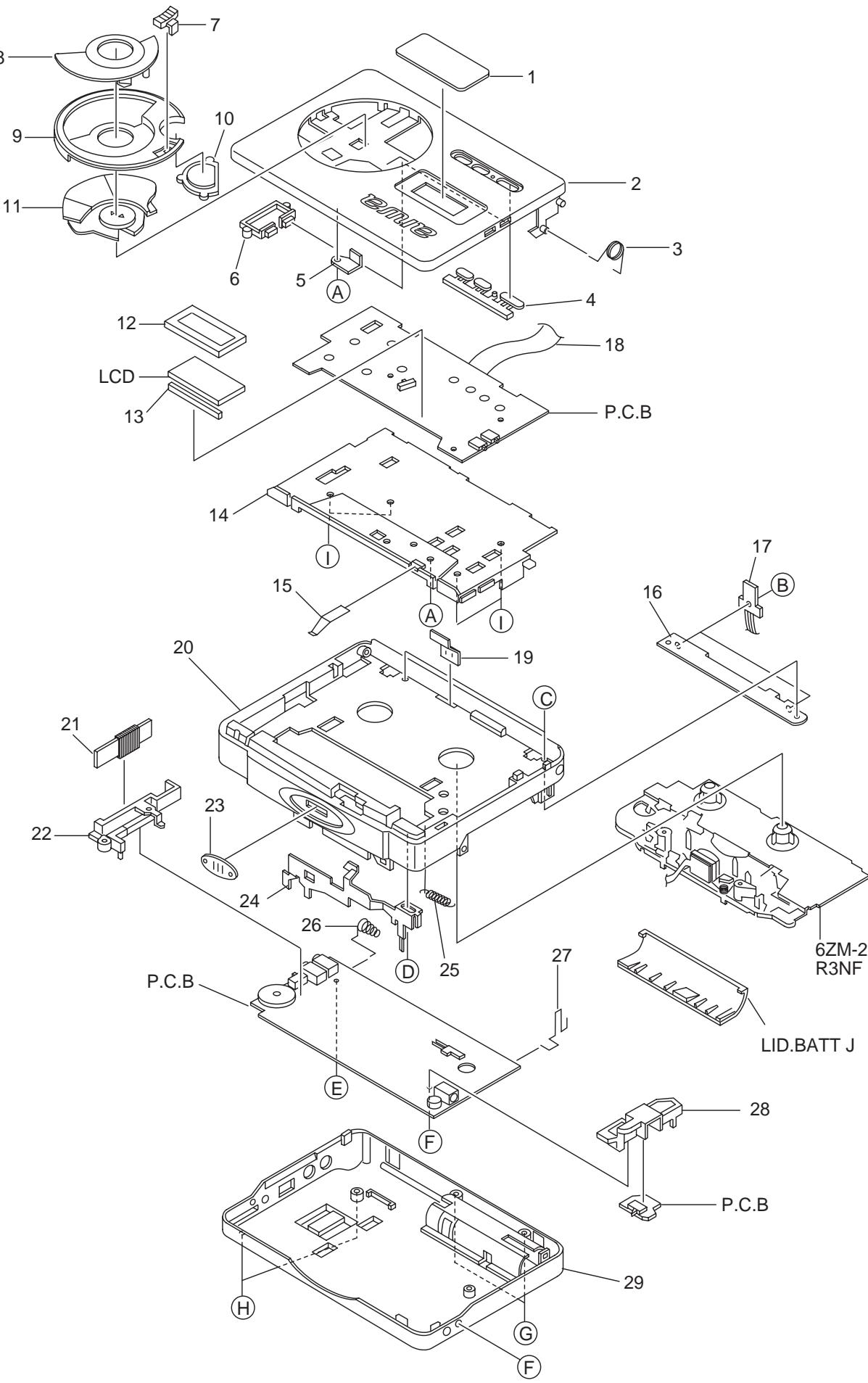
### <AM SECTION>

Sensitivity : (S/N 10dB)  
 Less than 58dB  
 [at 630kHz]  
 Less than 56dB  
 [at 999 / 1440kHz]  
 S/N ratio : (Input 74dB)  
 More than 26dB  
 [at 630kHz]  
 More than 25dB  
 [at 999 / 1440kHz]  
 Distortion : Less than 5% (at input 74dB)  
 Less than 10% (at input 120dB)  
 [at 999kHz]  
 Auto stop level : 60dB ± 10dB  
 [at 999kHz]  
 Intermediate frequency : 450kHz ± 3kHz

## <TAPE SECTION>

Tape speed : 3015Hz ± 50Hz  
 Wow & flutter : Less than 0.52% (RMS)  
 Take-up torque : 20 ~ 30g-cm (FWD, REV)  
 F.F torque : 70 ~ 150g-cm  
 Rew torque : 70 ~ 150g-cm  
 Back tension : 1.0 ~ 3.0g-cm (FWD, REV)  
 S/N ratio : More than 43dB (PB, DC)  
 More than 20dB (REC/PB, DC)  
 Distortion : Less than 2.5% (PB, DC)  
 Less than 10.0% (REC/PB, DC)  
 Noise level : Less than 3.5mV (PB, DC, MAX.)  
 Less than 0.3mV (PB, DC, MIN.)  
 Erasing Ratio:  
 Frequency response : More than 45dB  
 63Hz +0/-8dB ~ 8kHz ± 4dB  
 (NORMAL, PB)  
 63Hz +0/-8dB ~ 10kHz ± 4dB  
 (CRO2, PB)  
 125Hz +1/-7dB ~ 8kHz -1/-13dB  
 (REC/PB)  
 Test tape : TTA-100  
 TTA-210  
 TTA-320(NORMAL)  
 TTA-310(CRO2)

# MECHANICAL EXPLODED VIEW 1/1



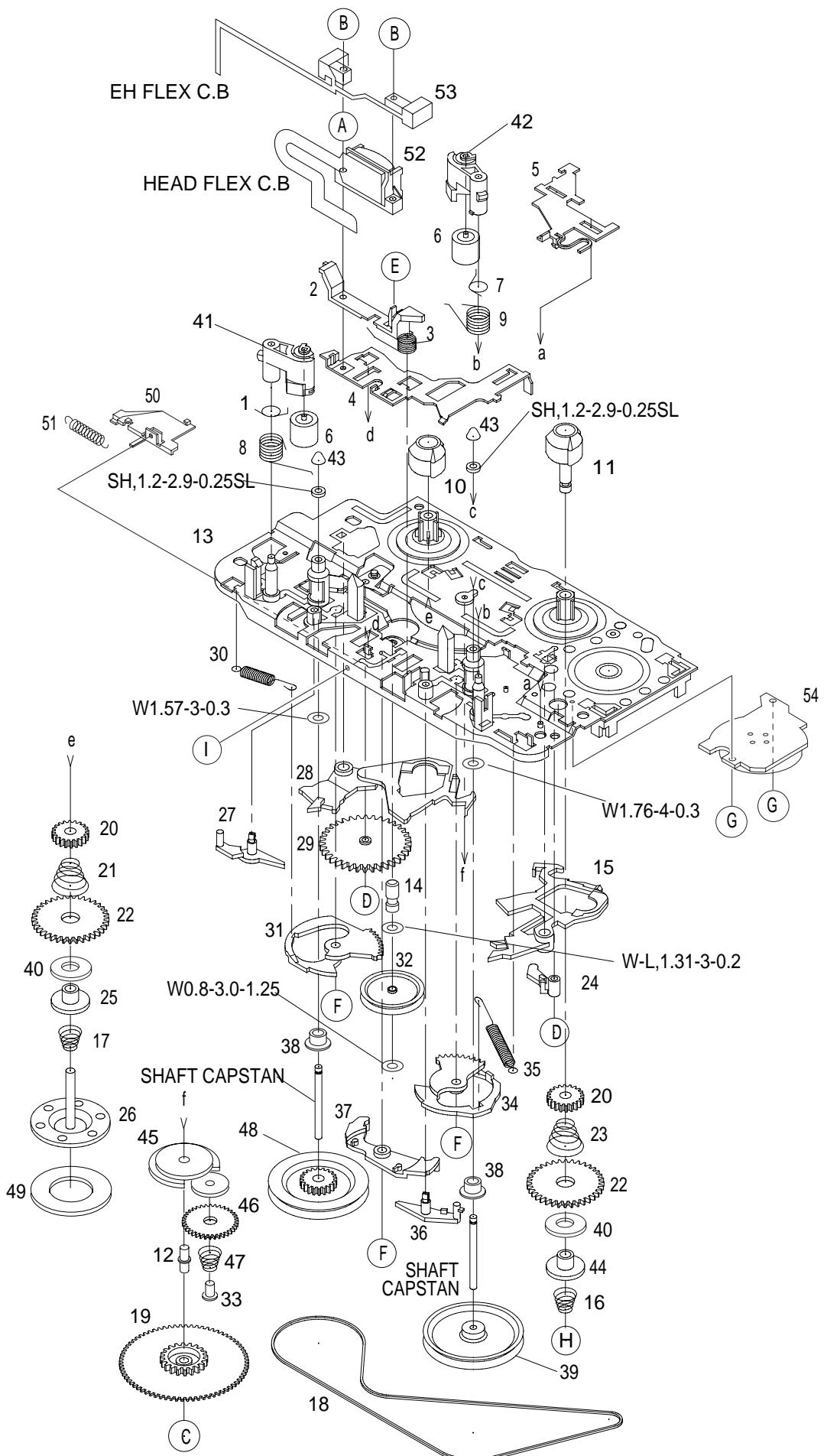
# MECHANICAL PARTS LIST 1 / 1

REF.NO.	PARTNO.	KANRI NO.	DESCRIPTION	REF.NO.	PARTNO.	KANRI NO.	DESCRIPTION
1	8Z-HJ8-005-010		WINDOW,LCD J	19	87-HG6-204-010		SPR-P,CASS
2	8Z-HJ8-018-010		LID,CASS JX703 S<3YH>	20	8Z-HJ8-010-010		FRAME,CENTER J
2	8Z-HJ8-001-010		LID,CASS JX704 S<4YH,YJ>	21	87-HRA-603-010		BAR-ANT,MW
2	8Z-HJ8-019-010		LID,CASS JX706 S<AH>	22	8Z-HJ8-203-010		HLDR,ANTENNA J
3	8Z-HR8-204-010		SPR-T,OPEN	23	8Z-HR8-012-010		KNOB,SL OPEN
4	8Z-HJ8-008-010		KEY,BAND	24	8Z-HR8-203-010		PLATE,LOCK
5	8Z-HR8-207-010		PLATE,STOPPER	25	8Z-HR8-215-010		SPR-E,OPEN
6	8Z-HJ8-007-010		KEY,TUNING	26	8Z-HR8-206-010		TERMINAL,BAT-
7	8Z-HJ8-004-010		KNOB,SL HOLD J	27	8Z-HR8-205-010		TERMINAL,BAT+
8	8Z-HJ8-012-010		PANEL,CONT S	28	8Z-HR8-202-010		HLDR,SW
9	8Z-HJ8-003-010		PANEL,CONT J	29	8Z-HJ8-017-010		CABI,ASSY J
10	8Z-HJ8-006-010		KEY,REC	A	88-HJ3-219-010		S-SCREW,+1.4-2.5 B HL(0.3)
11	8Z-HJ8-002-010		KEY,CONT J	B	87-067-359-010		SCREW+1.4-2.5
12	8Z-HJ8-205-010		HLDR,LCD J	C	87-067-706-010		S-SCREW +1.4-1.8 (BLK)
13	8Z-HR8-214-010		CONN, RUBBER1.3-30.5	D	87-HK5-235-010		S-SCREW,1.4-0.6-2.5
14	8Z-HJ8-202-010		COVER, PWB J	E	87-067-430-010		VT1.4-5 BLK
15	8Z-HR8-208-010		SPR-P,POP UP	F	8Z-HR8-212-010		S-SCREW,+1.4-4.5 CR HL
16	8Z-HJ8-201-010		HLDR,REC SW	G	87-067-384-010		SCREWT1.4-3.5HL
17	87-HJ3-608-010		SW,LEAF REC ASSY	H	8Z-HR8-211-010		S-SCREW,+1.4-8 BLK HL
18	8Z-HJ8-607-010		PWB,FLEX 34P	I	8Z-HJ8-208-010		S-SCREW,+1.4-4 B HL(0.3)

## COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

# TAPE MECHANISM EXPLODED VIEW 1/1



# TAPE MECHANISM PARTS LIST 1 / 1

REF.NO.	PARTNO.	KANRI NO.	DESCRIPTION	REF.NO.	PARTNO.	KANRI NO.	DESCRIPTION
1	86-ZM2-255-010	SPR-T,PIN BACK L	3 6 86-ZM2-222-410 LEVER,PIN UP R				
2	86-ZM2-286-310	GUIDE,TAPE REC	3 7 86-ZM2-218-310 LEVER,HEAD UP				
3	86-ZM2-220-210	SPR-T,HEAD	3 8 86-ZM2-221-010 CLR,BRG N				
4	86-ZM2-285-210	LEVER,HEAD REC	3 9 86-ZM2-330-010 FLY-WHL,R2				
5	86-ZM2-347-010	LEVER,MS EJECT	4 0 86-ZM2-239-010 FELT,				
6	86-ZM2-226-110	ROLLER ASSY,PINCH	4 1 86-ZM2-225-310 ARM,PINCH L				
7	86-ZM2-254-010	SPR-T,PIN BACK	4 2 86-ZM2-224-210 ARM,PINCH R				
8	86-ZM2-230-110	SPR-T,PINCH L	4 3 86-ZM2-283-210 CAP,SHAFT				
9	86-ZM2-229-110	SPR-T,PINCH R	4 4 86-ZM2-275-310 CAP,SLIP R				
10	86-ZM2-240-110	CAP,REEL	4 5 86-ZM2-210-710 LEVER,FR				
11	86-ZM2-234-110	SHAFT,REEL R	4 6 86-ZM2-211-210 GEAR,FR				
12	86-ZM2-251-310	SHAFT,GEAR B	4 7 86-ZM2-213-210 SPR-C,FR				
13	86-ZM2-361-110	CHAS ASSY,OUT-SERT P10	4 8 86-ZM2-314-110 FLY-WHL,L2				
14	86-ZM2-268-310	SHAFT,PULLEY BELT 2	4 9 86-ZM2-282-010 SH,AUTO 2				
15	86-ZM2-232-310	LEVER,REEL R	5 0 86-ZM2-342-010 LEVER ASSY,EJECT				
16	86-ZM2-306-010	SPR-C,BT 2	5 1 86-ZM2-349-010 SPR-E,EJECT				
17	86-ZM2-243-310	SPR-C,BT	5 2 8Z-HK8-619-010 HEAD,ASSY 6ZM-2(P10)				
18	86-ZM2-329-210	BELT,P5	5 3 86-ZM2-326-010 HEAD ASSY,EH 6ZM-2 R2				
19	86-ZM2-209-310	GEAR,B	5 4 M8-6ZS-393-000 ABL-63 D				
20	86-ZM2-238-710	GEAR,FF	A 86-ZM2-338-010 W-L,1.47-2.4-0.125 W/ADH				
21	86-ZM2-245-410	SPR-C,SLIP L	B 86-ZM2-296-110 S-SCREW,+1.4-8.45				
22	86-ZM2-237-010	GEAR,PLAY	C 87-067-516-010 PW,3-1.58-0.25,SLIT				
23	86-ZM2-241-310	SPR-C,SLIP R	D 87-067-860-010 PW,3-0.95-0.4				
24	86-ZM2-272-010	LEVER,SW P 8.4	E 86-ZM2-364-010 W-L,1.47-2.4-0.188 W/ADH 0.05				
25	86-ZM2-236-510	CAP,SLIP	F 86-ZM2-319-010 W-L,0.95-3-0.35				
26	86-ZM2-235-210	SHAFT,REEL L	G 88-HK5-228-010 S-SCREW,+1.4-2 CR				
27	86-ZM2-223-310	LEVER,PIN UP L	H 86-ZM2-278-010 W-P,1.36-4-0.2 SLT				
28	86-ZM2-233-310	LEVER,REEL L	I 87-261-500-310 SCREW V+1.4-1.4 (BK)				
29	86-ZM2-208-310	GEAR,A					
30	86-ZM2-217-210	SPR-E,CAM L					
31	86-ZM2-216-510	LEVER,CAM L					
32	86-ZM2-276-010	PULLEY,COUPLER					
33	86-ZM2-212-310	SHAFT,FR					
34	86-ZM2-214-510	LEVER,CAM R					
35	86-ZM2-215-210	SPR-E,CAM R					

## ACCESSORIES / PACKAGE LIST

REF.NO.	PARTNO.	KANRI NO.	DESCRIPTION
1	8Z-HJ8-914-010		IB,AH(ECK)S 706<AH>
1	8Z-HJ8-915-010		IB,YH(ECK)S 703<3YH>
1	8Z-HJ8-904-010		IB,YJ(ECH)S 704<4YH,YJ>
2	84-447-019-310		CLIP,BELT
3	87-B30-150-210		HEADPHONE,HP-M006A(F)<3YH>
3	87-B30-251-010		HEADPHONE,HP-M042 (F)<4YH,YJ,AH>
4	8Z-HJ8-951-010		RC UNIT, RC704<4YH,YJ,AH>
5	87-041-083-110		CM-S40A

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